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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,687	03/03/2004	Ezio Musso	108910-00123	2294
4372	7590	01/04/2008	EXAMINER	
ARENT FOX LLP			SERGENT, RABON A	
1050 CONNECTICUT AVENUE, N.W.			ART UNIT	PAPER NUMBER
SUITE 400			1796	
WASHINGTON, DC 20036			NOTIFICATION DATE DELIVERY MODE	
			01/04/2008 ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/790,687	MUSSO ET AL.
Examiner	Art Unit	
Rabon Sergeant	1796	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on October 29, 2007.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-10 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. 09/375,239.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_ .  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_ . 5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 22, 2007 has been entered.

2. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to provide support for the claimed subject matter. Applicants have amended their claims to be in Jepson format and have stated that the improvement comprises substituting CFC-11 with the claimed azeotropic or near azeotropic foaming compositions. As interpreted, these claims require the exact substitution of CFC-11 with the claimed azeotropic or near azeotropic foaming compositions; in other words, the same foaming conditions and quantity of blowing agent that is used with CFC-11 must be able to be used with the claimed azeotropic or near azeotropic foaming compositions. However, applicants have not provided support for such claims. Applicants' specification fails to disclose and the examples have not established that the claimed invention can be practiced by merely substituting CFC-11 for the claimed azeotropic or near azeotropic foaming compositions while holding all variables, such as quantity of components, and conditions the same. In fact, applicants' examples on page 33 of the specification support the position that support does not exist for the claimed substitution, since

the respective examples employing CFC-11 and the claimed azeotropic or near azeotropic foaming compositions differ in terms of quantities of water, blowing agent, and isocyanate and further differ in terms of density. Furthermore, applicants have not provided support for the claims as amended, in that applicants have failed to disclose CFC-11 blown foams having the claimed range of density for all polyurethane foam formulations encompassed by the claims. Applicants have only provided support for a specific formulation having a density of exactly 30 kg/m<sup>3</sup> (see example  $\alpha$ ).

3. The examiner has considered applicants' remarks of October 22, 2007 and the remarks of May 24, 2007, and the position maintained that the remarks fail to alleviate the examiner's concerns. As the examiner sees it, there are two issues to be addressed. The first issue is whether applicants intend the substitution of CFC-11 for the claimed blowing agents to be an exact substitution; in other words, it must be resolved if applicants intend that the blowing agents can be used in place of CFC-11 while holding all other variables constant, such as species of reactants and components, other than the argued blowing agent, and quantities of such components, including the quantity of blowing agent. Despite applicants' response, given the structure and language of the claims, it remains unclear if, in fact, this is what applicants actually intend. The second issue is whether applicants adequately describe such a substitution for the full scope of the claims, and the position is taken that, despite applicants' arguments, applicants' examples simply do not support such a substitution where the aforementioned variables are held constant. The examiner has considered the 37 CFR 1.132 declaration of May 24, 2007; however, the declaration is insufficient to resolve the issue for the following reasons. Firstly, the declaration is deficient, because it is unclear if applicants are referring to composition  $\alpha$  of the

specification or composition  $\gamma$  of the specification. The CFC-11 based composition of the declaration appears to correspond to composition  $\alpha$  of the specification; however, the declaration indicates that the composition corresponds to composition  $\gamma$  of the specification. See third and fourth lines from bottom of page 2 of the declaration. Secondly, the position is taken that the declaration fails to establish support for the substitution of CFC-11 using blowing agents other than HFPE1/HFC 365MFC (60/40) and foam compositions other than those corresponding to composition  $\alpha$ ; therefore, the declaration fails to indicate that support exists for the full scope of applicants' claims. It is noted that applicants have argued that the specification provides support for formulations having densities of other than 30 kg/m<sup>3</sup>; however, this argument is not seen to be relevant to the issues at hand. As aforementioned within paragraph 2, the issue at hand pertains to whether applicants have provided support for all polyurethane foam formulations having the claimed range of density as opposed to compositions having different densities.

4. As aforementioned, despite applicants' response of October 22, 2007, it is not seen that the issues set forth by the examiner within paragraphs 2 and 3 have been adequately addressed. It remains unclear how the substitution requirement for CFC 11 is to be interpreted, and depending on such interpretation, if support exists for the full scope of the claims. It is not seen that applicants' response provides any meaningful clarification for these issues.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-4, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Klug et al. ('882 or '016 or '931).

Patentees disclose azeotropic compositions and their use as blowing agents for polyurethane foams, wherein compositions that correspond to applicants' compositions are disclosed. See abstracts. Since azeotropic compositions are disclosed, applicants' percent compositions are considered to be inherently met by the references. The examiner has again considered applicants' arguments; however, the position is maintained that the disclosed formulas encompass the claimed compounds and are not so extensive that one could not have envisaged the claimed combination of fluoroether and hydrofluorocarbon.

7. Despite applicants' arguments of October 22, 2007, the anticipation rejection has been maintained for the previously set forth reasons. Furthermore, the rejection is considered to be tenable in view of the guidelines set forth within MPEP 2131.02.

8. Claims 1-4, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klug et al. ('882 or '016 or '931).

Patentees disclose azeotropic compositions and their use as blowing agents for polyurethane foams, wherein applicants' claimed compounds of the claimed composition are encompassed by the disclosed formulas for the components of the disclosed azeotropic composition. See abstracts. Since azeotropic compositions are disclosed, applicants' percent compositions are considered to be met by the references. Though patentees fail to specifically exemplify applicants' claimed component species, the position is taken in view of the disclosures of the prior art that it would have been obvious to select a fluoroether and a hydrofluorocarbon that satisfy the conditions of the aforementioned formulas and to utilize the resulting azeotropic blend in its art recognized capacity as a blowing agent for the production of polyurethane foam. The position is additionally taken that controlling the density of the foam to arrive at a certain or specific density value amounts only to the control or optimization of result effective variables.

*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klug et al. ('882 or '016 or '931) in view of Barthelemy et al. ('320).

As aforementioned, Klug et al. are considered to disclose azeotropic compositions and their use as blowing agents for polyurethane foams that at the least render obvious applicants' azeotropic composition and their method for producing a polyurethane foam. However, while

Klug et al. are silent regarding the use of additional blowing agents, such as water or carbon dioxide, within polyurethane foam formulations, the use of water in combination with fluoroether azeotropes as blowing agents for polyurethane foams was known at the time of invention. This position is supported by the teachings of Barthelemy et al. ('320). See Table III. Therefore, the position is taken that it would have been obvious to utilize water and carbon dioxide (inherently generated by the use of the water blowing agent) as additional blowing agents with the foam formulations of Klug et al. so as to arrive at the instant invention.

10. Despite applicants' arguments of October 22, 2007, the rejections have been maintained for the reasons previously set forth. Applicants' argument that one would not have been able to optimize or control the density value absent knowledge of a density reference value is not convincing, because the argued density value appears to be conventional within the art and no particular relevance is seen to be associated with it. In other words, given the state of the art, the teachings of the relied upon prior art, and the artisans' skill, the position is taken that it would have been obvious to one to produce a foam having the claimed conventional density. Lastly, given the aforementioned position concerning how substitution of CFC 11 is to be interpreted, it is unclear that arguments concerning such substitution are commensurate in scope with the claims.

11. Applicants' arguments of May 24, 2007 have again been considered; however, the examiner's positions set forth within the previous Office actions remain viable and have been maintained in their entireties. As with the previous response, applicants have essentially argued that the prior art fails to teach the use of applicants' claimed blowing agents as substitutes for CFC-11. In response, the position is taken that the prior art serves to teach the use of applicants'

azeotropic or near azeotropic compositions as blowing agents for polyurethane foams and that the disclosed blowing agents would be understood by one of ordinary skill to be viable replacements for virtually any conventional blowing agent, including CFC-11. Applicants' arguments with respect to the examiner's position regarding the control or optimization of result effective variables fail to appreciate the state of the art and the skilled artisan's understanding within the art concerning the use of physical blowing agents to foam a polyurethane composition. Given the disclosures within the prior art, the skilled artisan would have been able through routine experimentation to determine optimal blowing agent formulations and quantities so as to obtain a desired result; i.e., the substitution of environmentally damaging blowing agents with less damaging ones.

12. Applicants' arguments with respect to the declaration, filed August 17, 2005, have again been considered; however, the declaration remains deficient for the reasons previously set forth. Specifically, the example of the declaration is not commensurate in scope with the claims, with respect to species of components or quantities of components, and it is by no means clear that applicants' results are unexpected. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. *In re Reese*, 129 USPQ 402. Furthermore, regarding applicants' showings that other blowing compositions yield unsuitable foams, the position is taken that it is to be presumed that skilled workers would as a matter of course, if they do not immediately obtain desired results, make certain experiments and adaptations, within the skill of the competent worker; therefore, the failures of experimenters who have no interest in succeeding should not be accorded great weight. *In re Michalek*, 162 F.2d 229, 74 USPQ 107

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(CCPA 1947); *In re Reid*, 179 F.2d 998, 84 USPQ 478 (CCPA 1950). The position is maintained that applicants' arguments have not rectified these deficiencies.

Any inquiry concerning this communication should be directed to Rabon Sergent at telephone number (571) 272-1079.

*Rabon Sergent*  
RABON SERGENT  
PRIMARY EXAMINER

R. Sergent  
December 26, 2007